

D1 least about 7 g/L when cultured in a medium containing at least about 4% carbon source at the start of culturing and the addition of at least an additional 6% by weight of carbon source during the culturing, and at least about 2% nitrogen source at the start of culturing for about 5 to 10 days with agitation and aeration.

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Please add the following new claim 33:

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but E2 --33. (New) A process for producing arachidonic acid or lipid containing arachidonic acid comprising the steps of culturing a microorganism, belonging to the genus *Mortierella* and having resistance to a carbon source of high concentration, in a medium D2 having a carbon source concentration of at least 4% by weight at the start of culturing and the addition of at least an additional 6% by weight of carbon source during the culturing, thereby forming arachidonic acid or lipid containing arachidonic acid and recovering arachidonic acid, wherein the microorganism produces arachidonic acid of at least about 7 g/L when cultured in a medium containing at least about 4% carbon source at the start of culturing and the addition of at least an additional 6% by weight of carbon source during the culturing, and at least about 2% nitrogen source at the start of culturing for about 5 to 10 days with agitation and an aeration rate of at least about 1 vvm.--

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Add E3